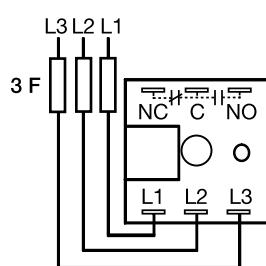


TVM SERIES



Wiring Diagram



L1 = Phase A
 L2 = Phase B
 L3 = Phase C
 NO = Normally Open
 NC = Normally Closed
 C = Common, Transfer Contact

 Relay contacts are isolated.

 F = 2A Fast acting fuses are recommended, but not required

Ordering Information

MODEL	LINE VOLTAGE	VOLTAGE UNBALANCE	TRIP DELAY	RESTART DELAY
TVM208A100.5S3S	208VAC	10%	0.5s	3s
TVM230A101S1S	230VAC	10%	1s	1s
TVM460A41S5M	460VAC	4%	1s	5m
TVM460A75S2M	460VAC	7%	5s	2m
TVM480A45S5S	480VAC	4%	5s	5s
TVM480A100.5S3S	480VAC	10%	0.5s	3s

If you don't find the part you need, call us for a custom product 800-843-8848

Description

The TVM Series Provides protection for motors and other sensitive loads. Continuously measures the voltage of each of the three phases using a microcomputer circuit design that senses under and overvoltage, voltage unbalance, phase loss, and phase reversal. Protection is provided even when regenerated voltages are present. Includes a trip delay to prevent nuisance tripping and a restart delay to prevent short cycling after a momentary power outage.

Operation

Upon application of line voltage, the restart delay begins. The output relay is de-energized during restart delay. Under normal conditions, the output energizes after restart delay. Undervoltage, overvoltage, and voltage unbalance must be sensed for continuous trip delay period before the output is de-energized. The output will not de-energize if a fault is corrected during the trip delay. The restart delay begins as soon as the output relay de-energizes. If the restart delay is completed when the fault is corrected, the output relay will energize immediately.

The output relay will not energize if a fault or phase reversal is sensed as 3-phase input voltage is applied.

Reset: Reset is automatic upon correction of a fault.

LED Operation

The LED flashes green during the restart delay, then glows green when the output energizes. It flashes red during the trip delay then glows red when the output de-energizes. It flashes red/green if phase reversal is sensed.

Features & Benefits

FEATURES	BENEFITS
Proprietary microcontroller based circuitry	Constant monitoring to protect against phase loss, phase reversal; over, under, and unbalanced voltage; short cycling
Compact design measures 2 in. (50.8mm) square	Perfect for OEM applications where cost, size and ease of installation are important
LED indication	Provides diagnostics of relay, fault and time delay status
Encapsulated	Protects against shock, vibration and humidity

TVM SERIES

Accessories



LPSM003ZXID (Indicating), LPSM003Z (Non-indicating) Fuse Holders

Littelfuse POWR-SAFE Dead Front holders provide optimum protection to personnel for Class CC and Midget-Style fuses. 600 VAC/DC



OKLK002.T Midget Fuse (2 Amp)

10 x 38 fast acting, high-interrupting capacity, current-limiting type fuse. 600 Vac/500 Vdc



P1015-13 (AWG 10/12), P1015-64 (AWG 14/16), P1015-14 (AWG 18/22) Female Quick Connect

These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



P1023-20 DIN Rail Adapter

Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.



VRM6048 Voltage Reduction Module

Allows the voltage monitor to monitor a 3-phase 550 to 600VAC Line.

Specifications

Line Voltage

Type

3-phase delta or wye with no connection to neutral

208 to 480VAC

50 - 100 Hz

ABC

AC Line Frequency

Phase Sequence

Power Consumption

Approx. 2W for 240V units

Approx. 3W for 480V units

Overvoltage, Undervoltage, & Voltage Unbalance

Overvoltage & Undervoltage

Voltage detection with delay trip & automatic reset

88 - 92% of the selected line voltage

≤ +3% of trip voltage

109 - 113% of the selected line voltage

≤ -3% of trip voltage

≤ ±2%

Factory fixed from 4 - 10%

≤ -0.7% unbalance

Fixed from 0.2 - 100s ±15% or ±0.1s, whichever is greater

Fixed from 0.5s - 999m ±15% or ±0.2s, whichever is greater

Restart Delay Range

≤ 200ms; automatic reset

≥ 25% unbalance

Isolated SPDT relay contacts

Type

10A resistive @ 125VAC, 5A @ 250VAC,

1/4 hp @ 125VAC

10A resistive @ 240VAC, 1/4 hp @ 125VAC,

1/3 hp @ 250VAC, max. voltage 277VAC

Mechanical - 1 x 10⁶; Electrical - 1 x 10⁵

Rating

208 to 240VAC (55°C)

380 to 480VAC

ASME A17.1 Rule 210.6

NEMA MG1 14:30, 14:35

IEEE C62.41-1991 Level B

≥ 1500V RMS input to output terminals

≥ 2500V RMS input to output terminals

Protection

Phase Reversal/Failure

Motors and Generators

Surge

Dielectric Breakdown

208 to 240VAC

380 to 480VAC

Mechanical

Mounting

Dimensions

Termination

Environmental

Operating/Storage

Temperature

Humidity

Weight

Surface mount with one #8 (M5 x 0.8) screw

H 50.8 mm (2.0"); **W** 50.8 mm (2.0");

D 31.75 mm (1.25")

0.25 in. (6.35 mm) male quick connect terminals

-40° to 55°C / -40° to 85°C

95% relative, non-condensing

≤ 2.8 oz (79 g)

Данный компонент на территории Российской Федерации**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибуторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ Р В 0015-002 и ЭС РД 009

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